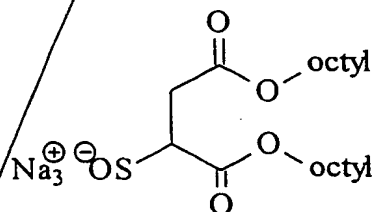


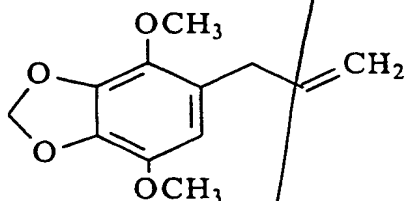
## CLAIMS

1. A method for deactivating a Der-f and/or a Der-p allergen comprising contacting the allergen with a deactivating effective amount of one or more of deactivants selected from

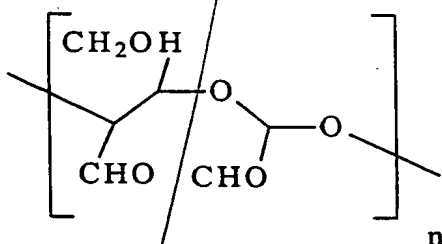
- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xiv) hinoki oil,
- xv) a composite of AgCl and TiO<sub>2</sub>,
- xvi) diazolidinyl urea,
- xvii) 6-isopropyl-m-cresol,
- xviii) a compound of formula I



xix) the compound of formula II



xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



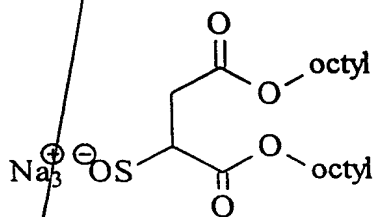
where  $n = 2$  to 200,

- xxi) urea,
- xxii) cyclodextrin,
- xxiii) hydrogenated hop oil,
- xxiv) polyvinylpyrrolidone,
- xxv) N-methylpyrrolidone,
- xxvi) the sodium salt of anthraquinone,
- xxvii) potassium thioglycolate, and
- xxviii) glutaraldehyde.

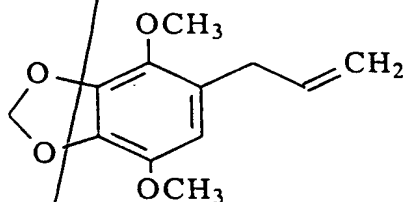
2. A method for deactivating a Der-f allergen comprising contacting the allergen with a deactivating effective amount of one or more deactivants selected from

- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,

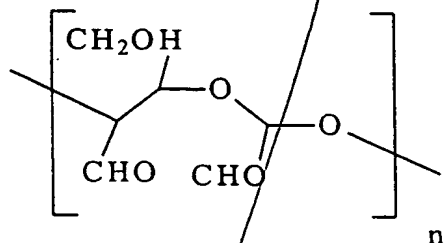
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xiv) hinoki oil,
- xv) a composite of AgCl and TiO<sub>2</sub>,
- xvi) diazolidinyl urea,
- xvii) 6-isopropyl-m-cresol,
- xviii) a compound of formula I



- xix) the compound of formula II



- xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



where  $n = 2$  to  $200$ ,

- xxi) urea,
- xxii) cyclodextrin,
- xxiii) hydrogenated hop oil,
- xxiv) polyvinylpyrrolidone,
- xxv) N-methylpyrrolidone, and
- xxvi) the sodium salt of anthraquinone.

3. A method for deactivating a Der-p allergen comprising contacting the allergen with a deactivating effective amount of one or more deactivants selected from

- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,

- [Na+].[Na+].[Na+].[O-]S(=O)(=O)C1C(=O)OCCOC1=O

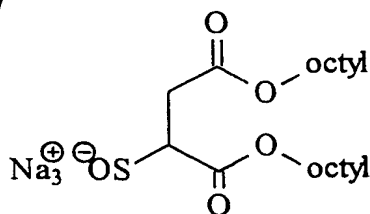
- COC1=C(C=C(C=C1)C=C)C2=CC=CC=C2C3=CC=CC=C3C4=CC=CC=C4C5=CC=CC=C5C6=CC=CC=C6C7=CC=CC=C7C8=CC=CC=C8C9=CC=CC=C9C10=CC=CC=C10C11=CC=CC=C11C12=CC=CC=C12C13=CC=CC=C13C14=CC=CC=C14C15=CC=CC=C15C16=CC=CC=C16C17=CC=CC=C17C18=CC=CC=C18C19=CC=CC=C19C20=CC=CC=C20C21=CC=CC=C21C22=CC=CC=C22C23=CC=CC=C23C24=CC=CC=C24C25=CC=CC=C25C26=CC=CC=C26C27=CC=CC=C27C28=CC=CC=C28C29=CC=CC=C29C30=CC=CC=C30C31=CC=CC=C31C32=CC=CC=C32C33=CC=CC=C33C34=CC=CC=C34C35=CC=CC=C35C36=CC=CC=C36C37=CC=CC=C37C38=CC=CC=C38C39=CC=CC=C39C40=CC=CC=C40C41=CC=CC=C41C42=CC=CC=C42C43=CC=CC=C43C44=CC=CC=C44C45=CC=CC=C45C46=CC=CC=C46C47=CC=CC=C47C48=CC=CC=C48C49=CC=CC=C49C50=CC=CC=C50C51=CC=CC=C51C52=CC=CC=C52C53=CC=CC=C53C54=CC=CC=C54C55=CC=CC=C55C56=CC=CC=C56C57=CC=CC=C57C58=CC=CC=C58C59=CC=CC=C59C60=CC=CC=C60C61=CC=CC=C61C62=CC=CC=C62C63=CC=CC=C63C64=CC=CC=C64C65=CC=CC=C65C66=CC=CC=C66C67=CC=CC=C67C68=CC=CC=C68C69=CC=CC=C69C70=CC=CC=C70C71=CC=CC=C71C72=CC=CC=C72C73=CC=CC=C73C74=CC=CC=C74C75=CC=CC=C75C76=CC=CC=C76C77=CC=CC=C77C78=CC=CC=C78C79=CC=CC=C79C80=CC=CC=C80C81=CC=CC=C81C82=CC=CC=C82C83=CC=CC=C83C84=CC=CC=C84C85=CC=CC=C85C86=CC=CC=C86C87=CC=CC=C87C88=CC=CC=C88C89=CC=CC=C89C90=CC=CC=C90C91=CC=CC=C91C92=CC=CC=C92C93=CC=CC=C93C94=CC=CC=C94C95=CC=CC=C95C96=CC=CC=C96C97=CC=CC=C97C98=CC=CC=C98C99=CC=CC=C99C100=CC=CC=C100C101=CC=CC=C101C102=CC=CC=C102C103=CC=CC=C103C104=CC=CC=C104C105=CC=CC=C105C106=CC=CC=C106C107=CC=CC=C107C108=CC=CC=C108C109=CC=CC=C109C110=CC=CC=C110C111=CC=CC=C111C112=CC=CC=C112C113=CC=CC=C113C114=CC=CC=C114C115=CC=CC=C115C116=CC=CC=C116C117=CC=CC=C117C118=CC=CC=C118C119=CC=CC=C119C120=CC=CC=C120C121=CC=CC=C121C122=CC=CC=C122C123=CC=CC=C123C124=CC=CC=C124C125=CC=CC=C125C126=CC=CC=C126C127=CC=CC=C127C128=CC=CC=C128C129=CC=CC=C129C130=CC=CC=C130C131=CC=CC=C131C132=CC=CC=C132C133=CC=CC=C133C134=CC=CC=C134C135=CC=CC=C135C136=CC=CC=C136C137=CC=CC=C137C138=CC=CC=C138C139=CC=CC=C139C140=CC=CC=C140C141=CC=CC=C141C142=CC=CC=C142C143=CC=CC=C143C144=CC=CC=C144C145=CC=CC=C145C146=CC=CC=C146C147=CC=CC=C147C148=CC=CC=C148C149=CC=CC=C149C150=CC=CC=C150C151=CC=CC=C151C152=CC=CC=C152C153=CC=CC=C153C154=CC=CC=C154C155=CC=CC=C155C156=CC=CC=C156C157=CC=CC=C157C158=CC=CC=C158C159=CC=CC=C159C160=CC=CC=C160C161=CC=CC=C161C162=CC=CC=C162C163=CC=CC=C163C164=CC=CC=C164C165=CC=CC=C165C166=CC=CC=C166C167=CC=CC=C167C168=CC=CC=C168C169=CC=CC=C169C170=CC=CC=C170C171=CC=CC=C171C172=CC=CC=C172C173=CC=CC=C173C174=CC=CC=C174C175=CC=CC=C175C176=CC=CC=C176C177=CC=CC=C177C178=CC=CC=C178C179=CC=CC=C179C180=CC=CC=C180C181=CC=CC=C181C182=CC=CC=C182C183=CC=CC=C183C184=CC=CC=C184C185=CC=CC=C185C186=CC=CC=C186C187=CC=CC=C187C188=CC=CC=C188C189=CC=CC=C189C190=CC=CC=C190C191=CC=CC=C191C192=CC=CC=C192C193=CC=CC=C193C194=CC=CC=C194C195=CC=CC=C195C196=CC=CC=C196C197=CC=CC=C197C198=CC=CC=C198C199=CC=CC=C199C200=CC=CC=C200C201=CC=CC=C201C202=CC=CC=C202C203=CC=CC=C203C204=CC=CC=C204C205=CC=CC=C205C206=CC=CC=C206C207=CC=CC=C207C208=CC=CC=C208C209=CC=CC=C209C210=CC=CC=C210C211=CC=CC=C211C212=CC=CC=C212C213=CC=CC=C213C214=CC=CC=C214C215=CC=CC=C215C216=CC=CC=C216C217=CC=CC=C217C218=CC=CC=C218C219=CC=CC=C219C220=CC=CC=C220C221=CC=CC=C221C222=CC=CC=C222C223=CC=CC=C223C224=CC=CC=C224C225=CC=CC=C225C226=CC=CC=C226C227=CC=CC=C227C228=CC=CC=C228C229=CC=CC=C229C230=CC=CC=C230C231=CC=CC=C231C232=CC=CC=C232C233=CC=CC=C233C234=CC=CC=C234C235=CC=CC=C235C236=CC=CC=C236C237=CC=CC=C237C238=CC=CC=C238C239=CC=CC=C239C240=CC=CC=C240C241=CC=CC=C241C242=CC=CC=C242C243=CC=CC=C243C244=CC=CC=C244C245=CC=CC=C245C246=CC=CC=C246C247=CC=CC=C247C248=CC=CC=C248C249=CC=CC=C249C250=CC=CC=C250C251=CC=CC=C251C252=CC=CC=C252C253=CC=CC=C253C254=CC=CC=C254C255=CC=CC=C255C256=CC=CC=C256C257=CC=CC=C257C258=CC=CC=C258C259=CC=CC=C259C260=CC=CC=C260C261=CC=CC=C261C262=CC=CC=C262C263=CC=CC=C263C264=CC=CC=C264C265=CC=CC=C265C266=CC=CC=C266C267=CC=CC=C267C268=CC=CC=C268C269=CC=CC=C269C270=CC=CC=C270C271=CC=CC=C271C272=CC=CC=C272C273=CC=CC=C273C274=CC=CC=C274C275=CC=CC=C275C276=CC=CC=C276C277=CC=CC=C277C278=CC=CC=C278C279=CC=CC=C279C280=CC=CC=C280C281=CC=CC=C281C282=CC=CC=C282C283=CC=CC=C283C284=CC=CC=C284C285=CC=CC=C285C286=CC=CC=C286C287=CC=CC=C287C288=CC=CC=C288C289=CC=CC=C289C290=CC=CC=C290C291=CC=CC=C291C292=CC=CC=C292C293=CC=CC=C293C294=CC=CC=C294C295=CC=CC=C295C296=CC=CC=C296C297=CC=CC=C297C298=CC=CC=C298C299=CC=CC=C299C300=CC=CC=C300C301=CC=CC=C301C302=CC=CC=C302C303=CC=CC=C303C304=CC=CC=C304C305=CC=CC=C305C306=CC=CC=C306C307=CC=CC=C307C308=CC=CC=C308C309=CC=CC=C309C310=CC=CC=C310C311=CC=CC=C311C312=CC=CC=C312C313=CC=CC=C313C314=CC=CC=C314C315=CC=CC=C315C316=CC=CC=C316C317=CC=CC=C317C318=CC=CC=C318C319=CC=CC=C319C320=CC=CC=C320C321=CC=CC=C321C322=CC=CC=C322C323=CC=CC=C323C324=CC=CC=C324C325=CC=CC=C325C326=CC=CC=C326C327=CC=CC=C327C328=CC=CC=C328C329=CC=CC=C329C330=CC=CC=C330C331=CC=CC=C331C332=CC=CC=C332C333=CC=CC=C333C334=CC=CC=C334C335=CC=CC=C335C336=CC=CC=C336C337=CC=CC=C337C338=CC=CC=C338C339=CC=CC=C339C340=CC=CC=C340C341=CC=CC=C341C342=CC=CC=C342C343=CC=CC=C343C344=CC=CC=C344C345=CC=CC=C345C346=CC=CC=C346C347=CC=CC=C347C3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- $$\left[ \begin{array}{c} \text{CH}_2\text{OH} \\ | \\ \text{---} \text{C} \text{---} \text{O} \text{---} \text{C} \text{---} \text{O} \text{---} \\ | \quad \quad | \\ \text{CHO} \quad \quad \text{CHO} \end{array} \right]_n$$

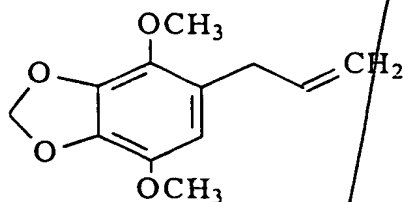
xxvii) / potassium thioglycolate, and  
xxviii) / glutaraldehyde.

4. A method for deactivating allergens deriving from Der-f and/or Der-p dust mites, said allergens being associated with faecal particles excreted by said mites on the surfaces of fabric materials selected from rugs, carpet and upholstered furniture, which method comprises applying to said fabric materials a deactivant selected from

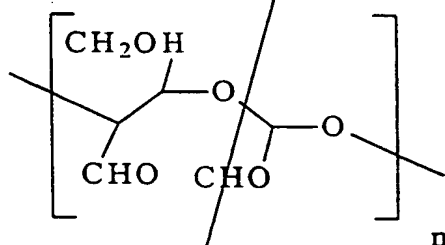
- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xiv) hinoki oil,
- xv) a composite of AgCl and TiO<sub>2</sub>,
- xvi) diazolidinyl urea,
- xvii) 6-isopropyl-m-cresol,
- xviii) a compound of formula I



xix) the compound of formula II



xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



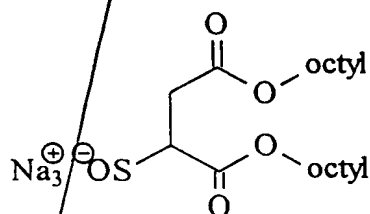
where  $n = 2$  to 200,

- xxi) urea,
- xxii) cyclodextrin,
- xxiii) hydrogenated hop oil,
- xxiv) polyvinylpyrrolidone,
- xxv) N-methylpyrrolidone,
- xxvi) the sodium salt of anthraquinone,
- xxvii) potassium thioglycolate, and
- xxviii) glutaraldehyde

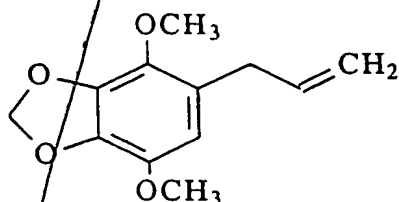
at an application rate of from 16 grams to 170 grams of deactivant per 10 square meters.

5. A method according to claim 4 in which the allergens derive from Der-f dust mites and the deactivant is selected from

- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xiv) hinoki oil,
- xv) a composite of AgCl and TiO<sub>2</sub>,
- xvi) diazolidinyl urea,
- xvii) 6-isopropyl-m-cresol,
- xviii) a compound of formula I

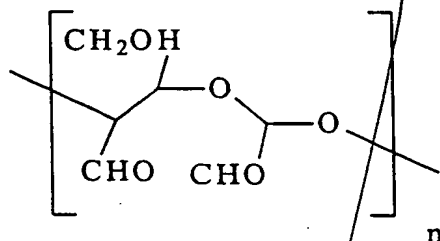


- xix) the compound of formula II





- xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



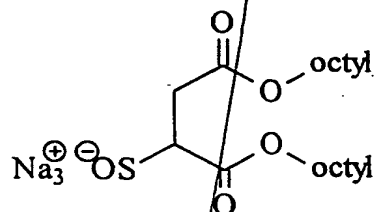
where  $n = 2$  to  $200$ ,

- xxi) urea,
- xxii) cyclodextrin,
- xxiii) hydrogenated hop oil,
- xxiv) polyvinylpyrrolidone,
- xxv) N-methylpyrrolidone, and
- xxvi) the sodium salt of anthraquinone.

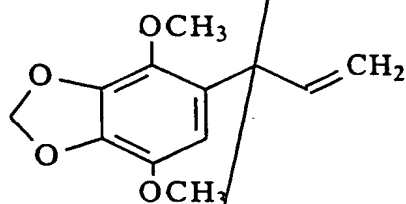
6. A method according to claim 4 in which the allergens derive from Der-p dust mites and the deactivant is selected from

- i) cedarwood oil, L<sub>6</sub>
- ii) hexadecyltrimethylammonium chloride, L<sub>7</sub>
- iii) aluminium chlorohydrate, L<sub>8</sub>
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10 L<sub>9</sub>
- vi) silica gel, L<sub>10</sub>
- vii) propylene glycol alginate, L<sub>11</sub>
- viii) ammonium sulphate, L<sub>12</sub>
- ix) hinokitiol, L<sub>13</sub>
- x) L-ascorbic acid, L<sub>14</sub>
- xi) immobilised tannic acid,
- xii) chlorohexidine, L<sub>15</sub>
- xiii) maleic anhydride, L<sub>16</sub>

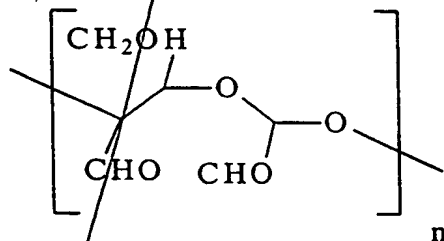
- xiv) hinoki oil,  
 xv) a composite of AgCl and TiO<sub>2</sub>,  
 xvi) diazolidinyl urea, L17  
 xvii) 6-isopropyl-m-cresol, L18  
 xviii) a compound of formula I



- xix) the compound of formula II



- xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



where n = 2 to 200,

- ~~xxi) urea,~~  
 xxvii) potassium thioglycolate, and L21  
 xxviii) glutaraldehyde.

Lu. 1/4/03  
A 7. A method according to ~~any of claims 1, 2, 4 or 5~~ <sup>claim 1</sup> in which the deactivant is selected from

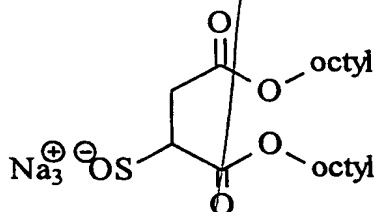
- xiv) hinoki oil,
- xv) a composite of AgCl with TiO<sub>2</sub>,
- xvi) diazolidinyl urea
- xvii) 6-isopropyl-m-cresol,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xxvi) the sodium salt of anthraquinone, L22
- xviii) a compound of formula I, and
- xix) the compound of formula II.

8. An aerosol composition containing

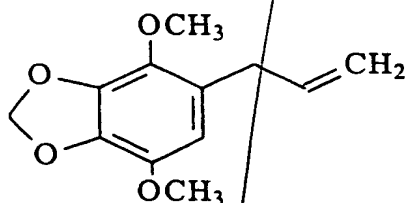
a) a deactivant selected from

- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xiv) hinoki oil,
- xv) a composite of AgCl and TiO<sub>2</sub>,
- xvi) diazolidinyl urea,
- xvii) 6-isopropyl-m-cresol,

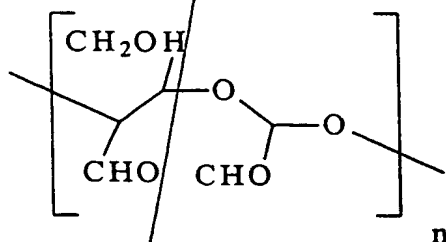
- xviii) a compound of formula I



- xix) the compound of formula II



- xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



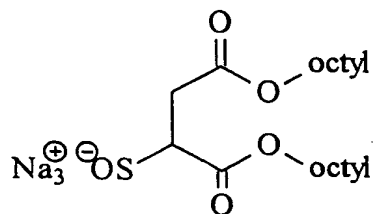
where n = 2 to 200,

- xxi) urea, L23  
 xxii) cyclodextrin, L24  
 xxiii) hydrogenated hop oil,  
 xxiv) polyvinylpyrrolidone, L25  
 xxv) N-methylpyrrolidone, L24  
 xxvi) the sodium salt of anthraquinone,  
 xxvii) potassium thioglycolate, and

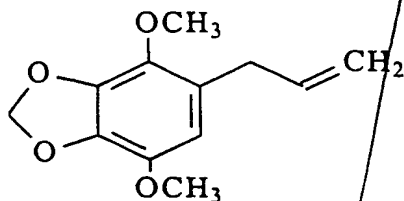
- xxviii) glutaraldehyde;
- b) a propellant; and
- c) optionally, a solvent.

9. An aerosol composition according to claim 8 in which the deactivant is selected from

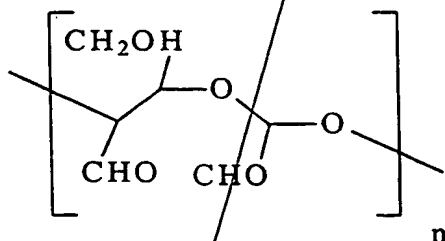
- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xiv) hinoki oil,
- xv) a composite of AgCl and TiO<sub>2</sub>,
- xvi) diazolidinyl urea,
- xvii) 6-isopropyl-m-cresol,
- xviii) a compound of formula I



- xix) the compound of formula II



- xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



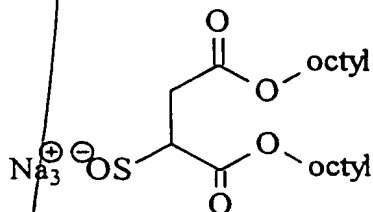
where  $n = 2$  to 200,

- xxi) urea,
- xxii) cyclodextrin,
- xxiii) hydrogenated hop oil,
- xxiv) polyvinylpyrrolidone,
- xxv) N-methylpyrrolidone, and
- xxvi) the sodium salt of anthraquinone.

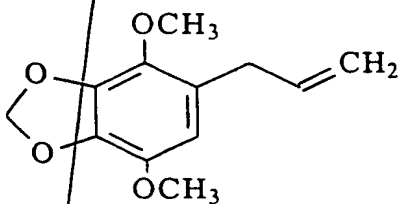
10. An aerosol composition according to claim 8 in which the deactivant is selected from

- i) cedarwood oil,
- ii) hexadecyltrimethylammonium chloride,
- iii) aluminium chlorohydrate,
- iv) 1-propoxy-propanol-2,
- v) polyquaternium-10

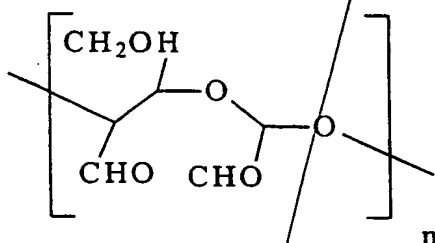
- vi) silica gel,
- vii) propylene glycol alginate,
- viii) ammonium sulphate,
- ix) hinokitiol,
- x) L-ascorbic acid,
- xi) immobilised tannic acid,
- xii) chlorohexidine,
- xiii) maleic anhydride,
- xiv) hinoki oil,
- xv) a composite of AgCl and TiO<sub>2</sub>,
- xvi) diazolidinyl urea,
- xvii) 6-isopropyl-m-cresol,
- xviii) a compound of formula I



- xix) the compound of formula II



- xx) a polymeric dialdehyde containing two or more of a recurring unit of the formula III



where  $n = 2$  to  $200$ ,

A ~~xxi)~~ urea,

xxvii) potassium thioglycolate, and

xxviii) glutaraldehyde.

11. A composition according to claims 8 ~~or 9~~ in which the deactivant is selected from

xiv) hinoki oil,

xv) a composite of AgCl with  $\text{TiO}_2$ ,

xvi) diazolidinyl urea

xvii) 6-isopropyl-m-cresol,

xii) chlorhexidine,

xiii) maleic anhydride,

xxvi) the sodium salt of anthraquinone,

xviii) a compound of formula I, and

xix) the compound of formula II.

12. A composition according to ~~any of~~ claims 8 ~~to 11~~ in which the amount of deactivant present is from 0.01% to 7%, the amount of propellant present is from 0.05% to 3%, and the amount of solvent present is from 0% to 99.95%, all percentages being by weight.



LM 1/14/03  
A  
13. A composition according to ~~any one of claims 8 to 12~~  
in which the propellant is selected from C<sub>1-4</sub> alkane and  
carbon dioxide.

14. A composition according to ~~any one of claims 8 to 13~~  
in which the solvent is selected from C<sub>1-6</sub> alcohols or  
water.

15. A composition according to claim 14 in which the  
solvent is ethanol.

A  
LM 1/14/03  
16. A composition according to ~~any one of claims 8 to 15~~  
in which the composition may also contain one or more of  
the following:

A  
fragrance  
a fragrance,  
a surfactant,  
an antimicrobial agent,  
a corrosion inhibitor, and/or  
a miticide.